REMARKS

Claims 1-14, 24, 28-41, 51, 55-57, and 82-91 were rejected. Claims 1-14, 24, 28-41, 51, and 55-57 are amended. Claims 82-91 are hereby cancelled. Applicants note Examiner's acknowledgement of Applicants' election of Group I in the reply filed March 25, 2008.

DRAWINGS

The drawings were objected to for not showing every feature of the claims. In particular, the Office noted that the "method steps" as disclosed in independent claim 1 were not depicted in any figure. Corrected drawing sheets were required. New Figure 8 is added by way of amendment in this Response and additional descriptive matter is added into the specification to include a new entry in the "Brief description of the figures" section as well as corresponding text in the "Detailed description of the preferred embodiments" section. Applicants submit that the addition of Figure 8 and accompanying text adds no new matter. In particular, support for new Figure 8 and accompanying text can be found throughout the original disclosure, and in particular in original claim 1 as well as on pages 11-19 of the originally-filed specification. Applicants respectfully request that these objections be withdrawn.

SPECIFICATION

The Abstract was objected to for not reflecting the elected species of Group I. Applicants respectfully request that these objections be withdrawn in light of amendments to the specification replacing the abstract.

The disclosure was objected to for omitting a "Cross Reference to Related Applications" section to inform of the related Provisional Application. Applicants respectfully request that this objection be withdrawn in light of amendments to the specification.

CLAIM OBJECTIONS

Claims 14, 32, and 37 were objected to for various informalities. Applicants respectfully request that these objections be withdrawn in light of the amendments to these claims.

CLAIM REJECTIONS 35 U.S.C. § 101

Claims 28-41 and 51 were rejected under § 101 for being directed to non-statutory subject matter. Applicants submit that these rejections are moot in light of amendments to the claims.

Claims 55-57 are rejected under § 101 for being lacking definite structure indicative of a physical apparatus. Thus – and because some embodiments are described in the specification as being implemented in software – the Office asserts that these claims can be read as nothing more than a system of software elements. But Applicants submit that these claims are means plus function claims as provided for by 35 U.S.C. 112, sixth paragraph, which states that a claim limitation expressed in means-plus-function language "shall be construed to cover the corresponding structure described in the specification and equivalents thereof." Thus, Applicants submit that any structure required to render these claims statutory are to be found in the specification.

CLAIM REJECTIONS 35 U.S.C. § 112

Claims 82-91 are rejected for failing to comply with the enablement requirement. Even though Applicants disagree with this rejection, Applicants cancel these claims without prejudice, reserving the right to reassert them in this or a continuing or divisional application. These claims are cancelled only to expedite prosecution.

Claims 7-9, 28-41, 51, and 55-57 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants submit that these rejections are moot in light of amendments to these claims.

CLAIM REJECTIONS 35 U.S.C. § 103

Claims 1-14, 24, 28-41, 51, and 55-57 were rejected under 35 U.S.C. 103(a) as being unpatentable over High Performance Scalable Image Compression with EBCOT" by Taubman ("Taubman") in view of U.S. Pat. No. 5,691,770 issued to Keesman et al. ("Keesman"). Amended claim 1 recites:

> A method of allocating or controlling an amount of bits for encoding of source data, including:
>
> (i) defining a target bit rate for the encoding of the source data;
>
> (ii) defining collections of coefficients of the source data;
>
> (iii) defining a global coding order of the collections of coefficients;
>
> (iv) defining a plurality of coding units and corresponding allowable truncation points for each of said collections of coefficients;
>
> (v) defining a local coding order of said coding units for each of said collections of coefficients;
>
> (vi) defining a rate value and a distortion value for each of said coding units of each of said collections of coefficients;
>
> (vii) defining an adaptive threshold value for each of said coding units of each of said collections of coefficients; and
>
> (viii) encoding each of the collections of coefficients in turn according to the global coding order, wherein if a predetermined termination criterion is not met for a particular coding unit of the plurality of coding units of one of the collections of coefficients, the particular coding unit will be included in an output code-stream, and if the termination criterion is met, an encoding of the one of the collection of coefficients is terminated.

The Office recognized that Taubman fails to teach or suggest "encoding each of the collections of coefficients *in turn*" as required by amended claim 1. Keesman col. 2 lines 19-33 was instead cited as teaching this subject matter. In particular, the Office argues that it would have been obvious to modify Taubman with Keesman's method to find an approximation for λ. Whether or not this is true, the cited text of Keesman merely teaches that the Lagrange multiplier λ can be estimated using the slope of an RD curve at or near a target bit rate for a set of source data coefficients. Nowhere does it describe encoding each of the collections of coefficients in turn as required in claim 1.

Furthermore, the Office cited Taubman, Section II "Rate Distortion Optimization" for teaching setting a threshold value for each of said coding units. But the cited text of Taubman does not teach an *adaptive* threshold as required by amended claim 1. In

particular, the Taubman threshold – which the Office takes to be λ – is not said to be adaptive. In fact, Applicants submit that Taubman computes an ideal value for λ which is then used for all coding units during the coding process. Taubman therefore fails to teach at least this element of amended claim 1.

Keesman also fails to cure the above-noted deficiency of Taubman. The threshold λ of Keesman is not adaptive in any sense. In fact, it is the same for all collections of coefficients. (See Keesman col. 6, lines 44-46.) Furthermore, one of ordinary skill in the art would have found no suggestion in Keesman to modify Taubman to achieve the adaptive threshold of claim 1. Because Keesman estimates λ using statistical analysis of all coefficients of the image to be coded (see Keesman, Abstract), an adaptive λ would have been counter-intuitive and not useful. Thus, Applicants submit that one of ordinary skill would not have found that Keesman provides motivation to modify Taubman to achieve the adaptive threshold of claim 1.

For at least these reasons, Applicants submit that the combination of Taubman and Keesman fails to teach or suggest all elements of claim 1 and that claim 1 is nonobvious and therefore patentable over the combination.

Claims 2-14 and 24 depend from claim 1 incorporating its limitations. Thus, for at least the same reasons as above, Applicants respectfully submit that these claims are also patentable over the combination.

Independent claims 28 and 55 recite subject matter generally similar to claim 1. And claims 29-41 and 51 depend from claim 28, while claims 56 and 57 depend from claim 55. Thus, for at least the same reasons, Applicants respectfully submit that claims 28-41, 51, and 55-57 are also patentable over the combination.

CONCLUSION

Applicants submit that all pending claims are in condition for allowance. Early issuance of the Notice of Allowance is respectfully requested. If the Examiner has any

questions, the Examiner is invited to contact the undersigned at (503) 796-2844. Please charge any shortages and credit any overages to Deposit Account No. 500393.

Respectfully submitted,
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